NE Drought Conditions
CARC Update: August 2006

Mark Svoboda and Mike Hayes
National Drought Mitigation Center

Al Dutcher, State Climatologist

School of Natural Resources
University of Nebraska-Lincoln

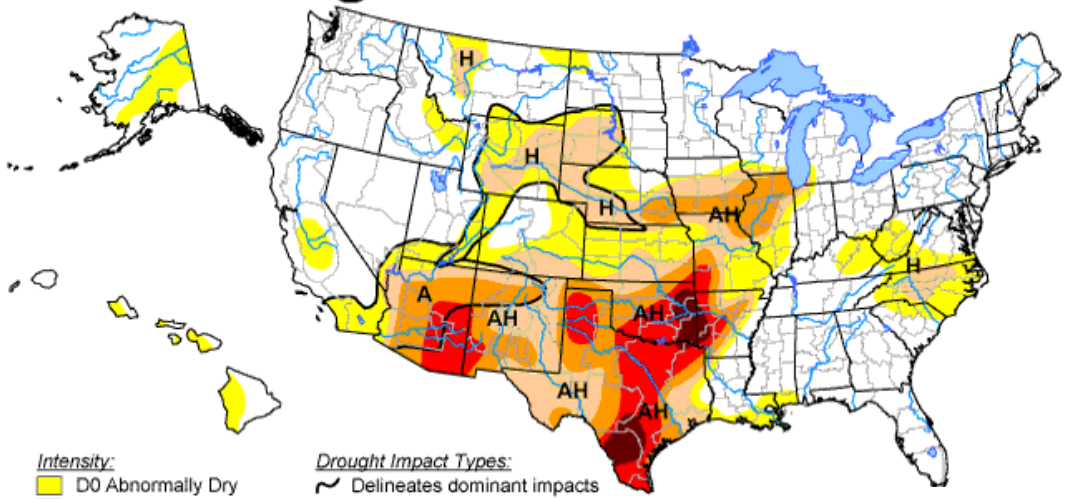
Current National and Regional Conditions…

University of Nebraska Lincoln

National Drought Mitigation Center

U.S. Drought Monitor

February 28, 2006
Valid 7 a.m. EST



Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:
- ~ Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

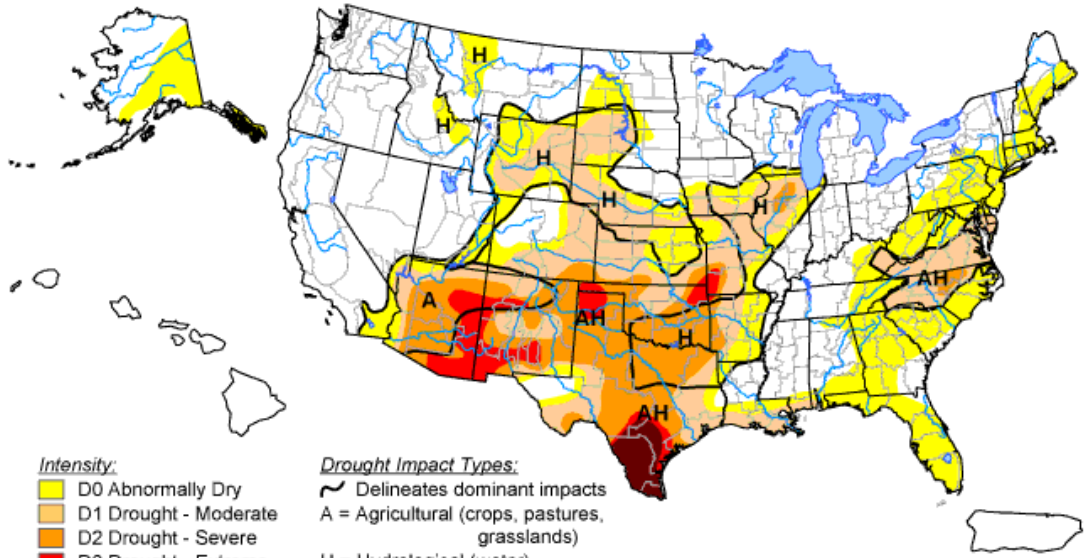
USDA National D

Released Th

Author: Brian Fuchs, Nati

U.S. Drought Monitor

April 4, 2006
Valid 7 a.m. EST



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- (No type = Both impacts)

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http://drought.unl.edu/dm

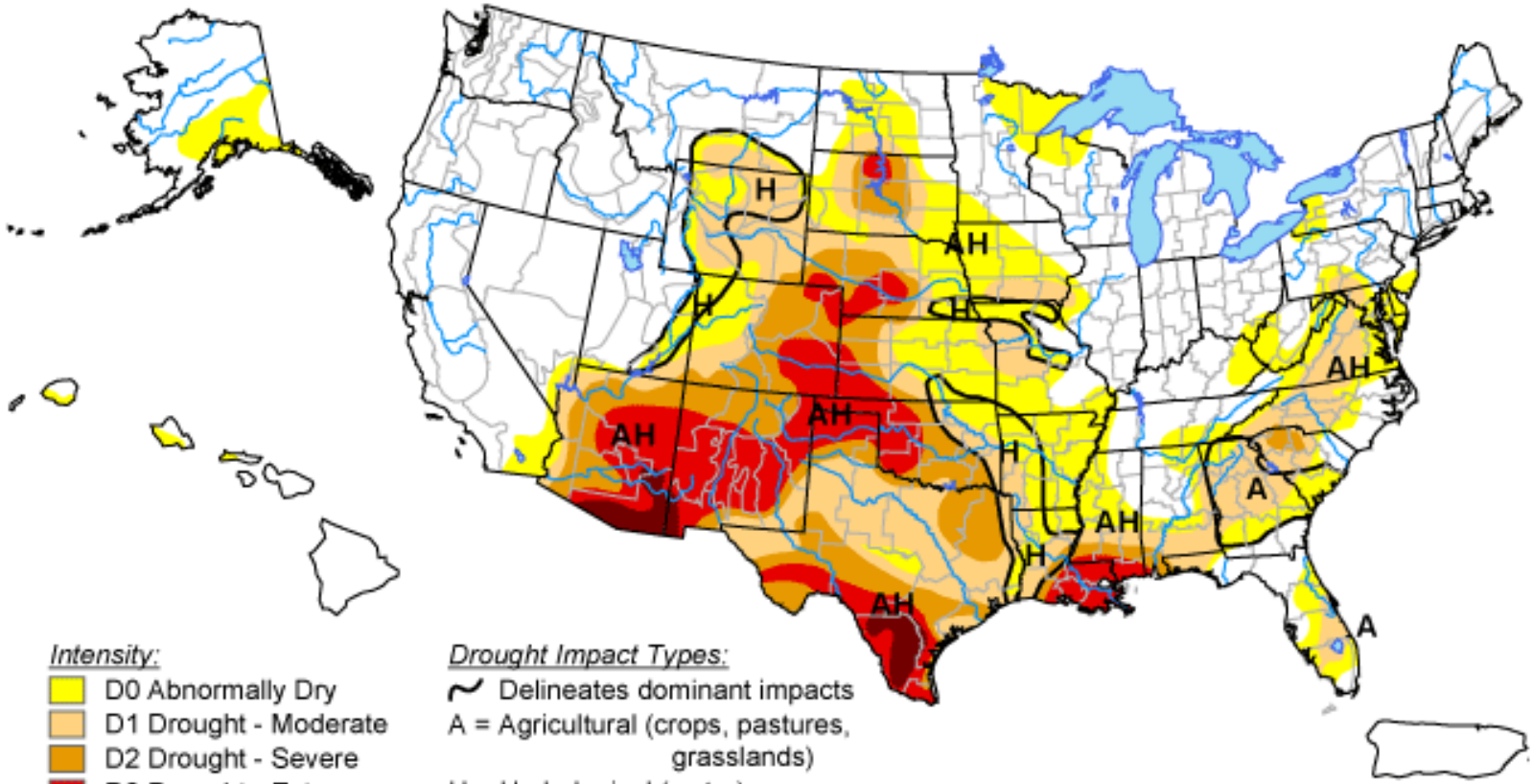
USDA National Drought Mitigation Center

Released Thursday, April 6, 2006
Author: Douglas Le Comte, CPC/NOAA

University of Nebraska Lincoln

U.S. Drought Monitor

June 13, 2006
Valid 8 a.m. EDT



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http://drought.unl.edu/dm

USDA National Drought Mitigation Center

Released Thursday, June 15, 2006

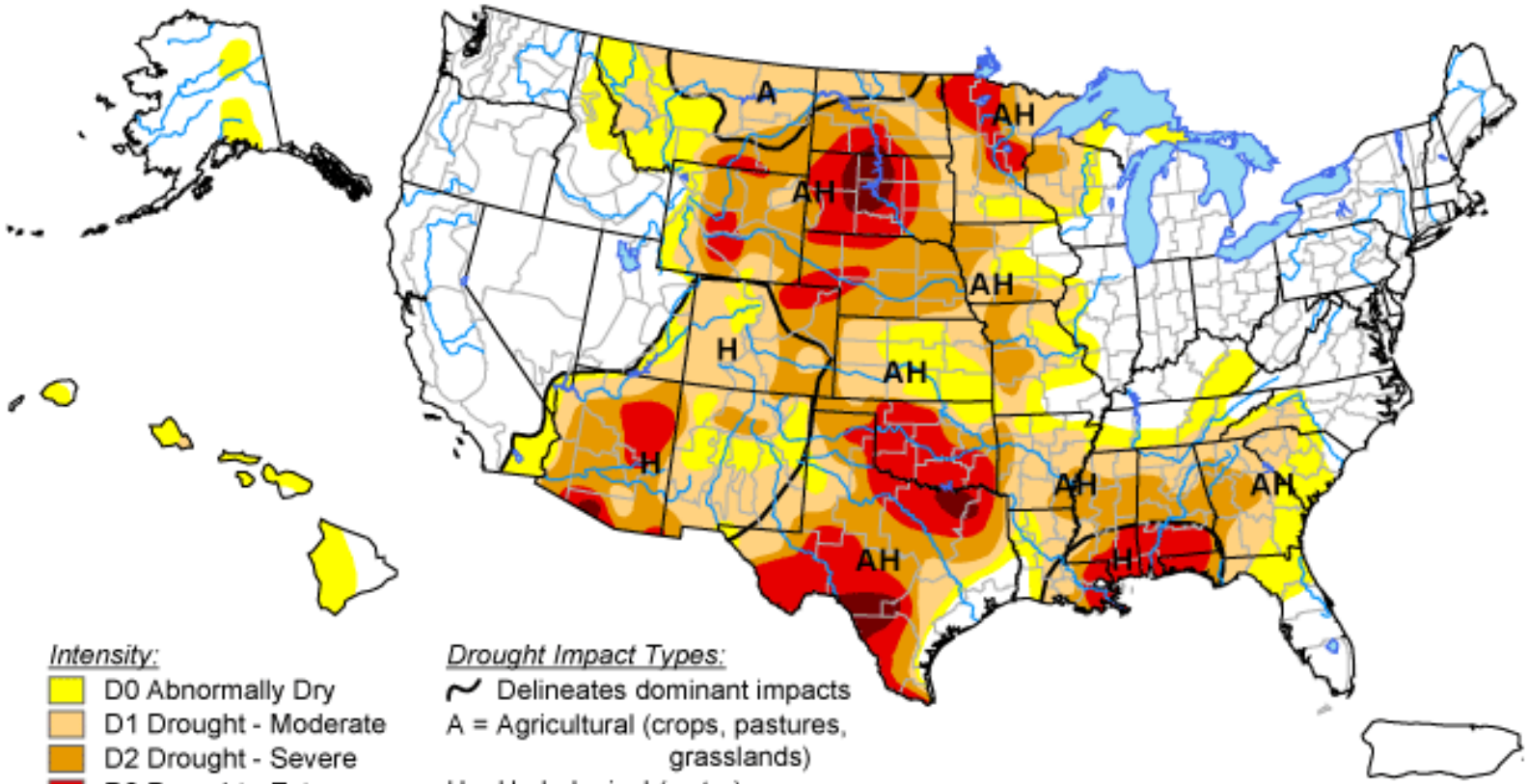
Author: Rich Tinker, Climate Prediction Center, NOAA

University of Nebraska Lincoln

National Drought Mitigation Center

U.S. Drought Monitor

August 1, 2006
Valid 8 a.m. EDT



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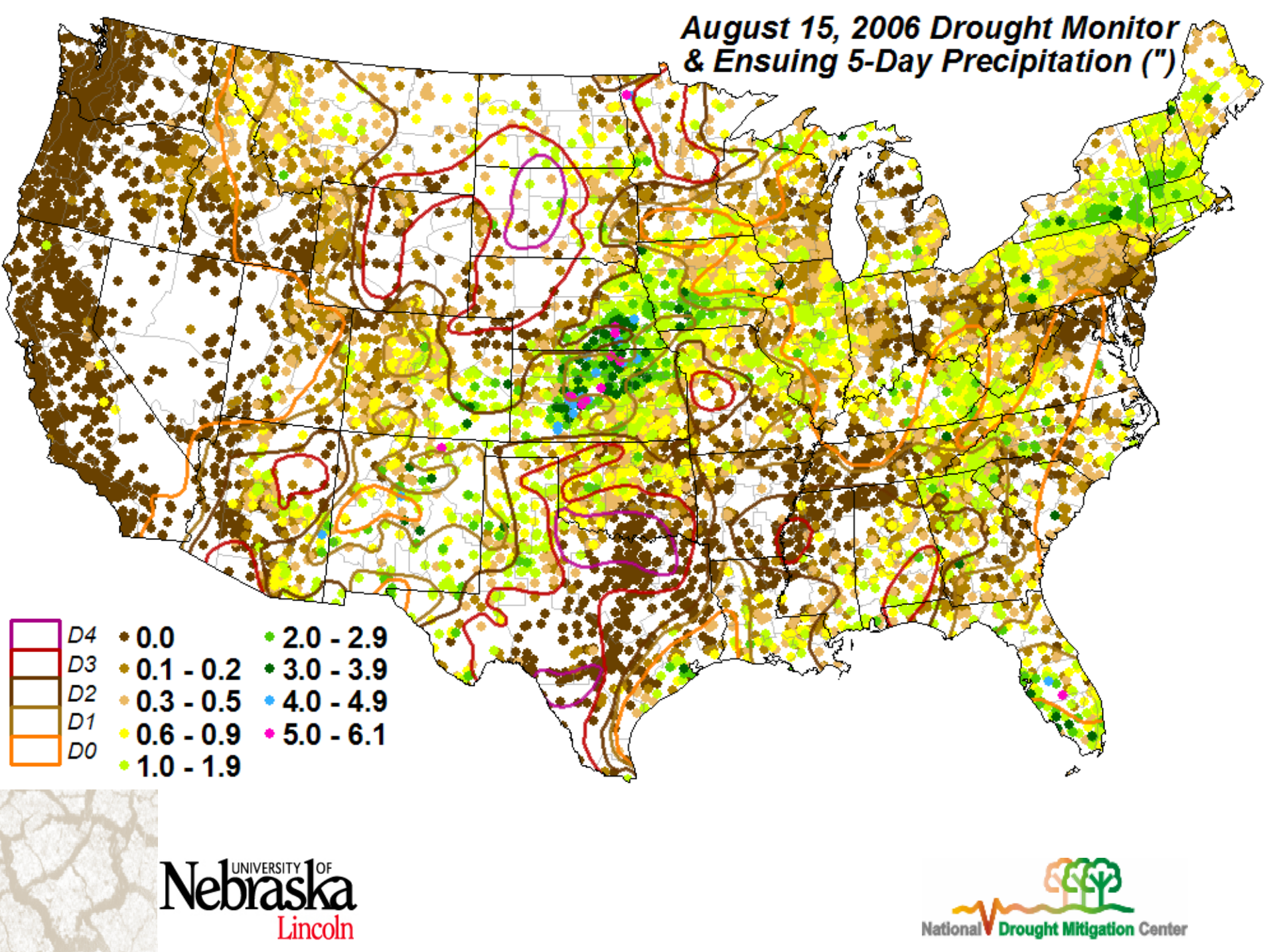
http://drought.unl.edu/dm

USDA National Drought Mitigation Center

Released Thursday, August 3, 2006

Author: David Miskus, JAWF/CPC/NCEP/NOAA

National Drought Mitigation Center



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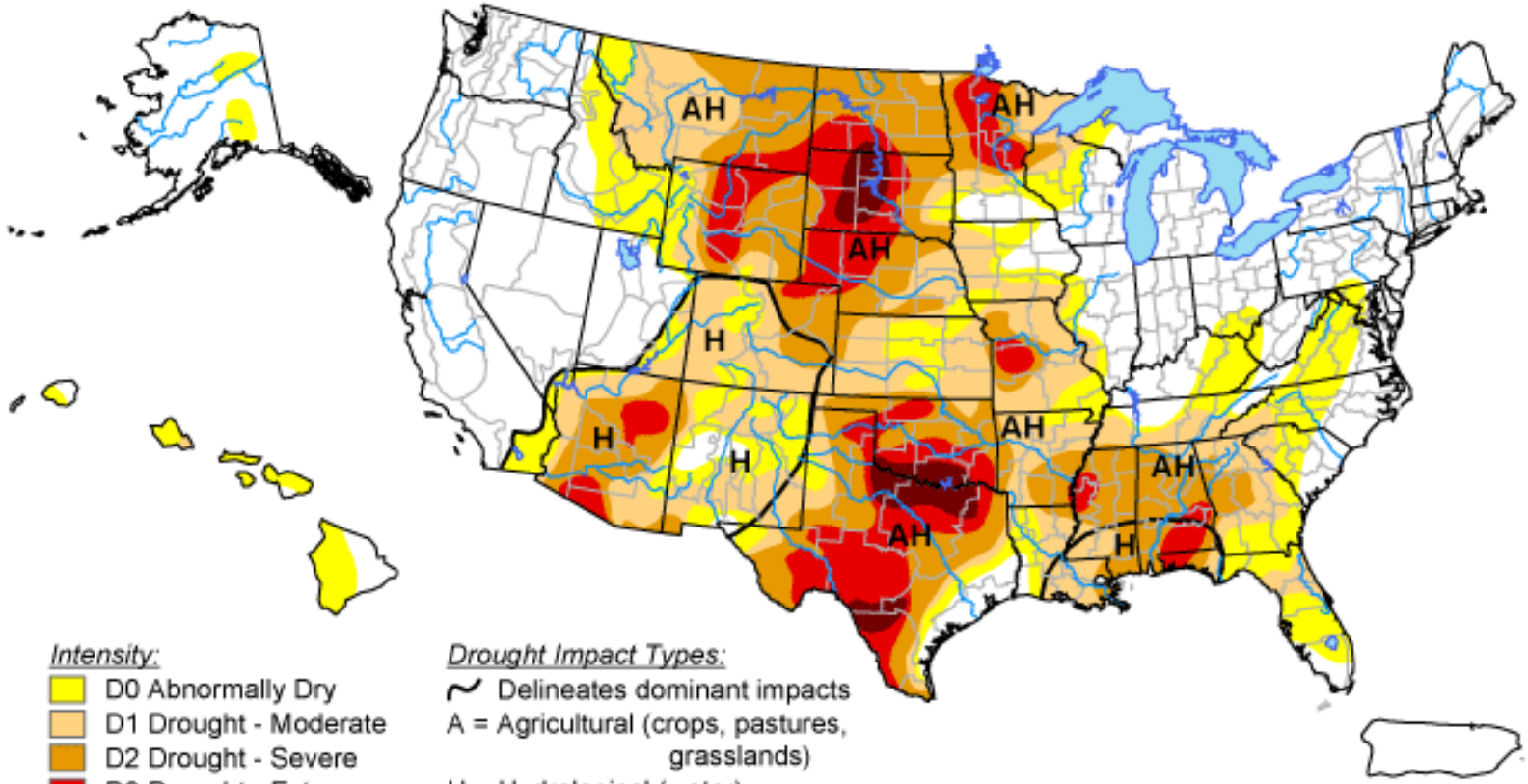
National Drought Mitigation Center

U.S. Drought Monitor

August 15, 2006
Valid 8 a.m. EDT



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http://drought.unl.edu/dm

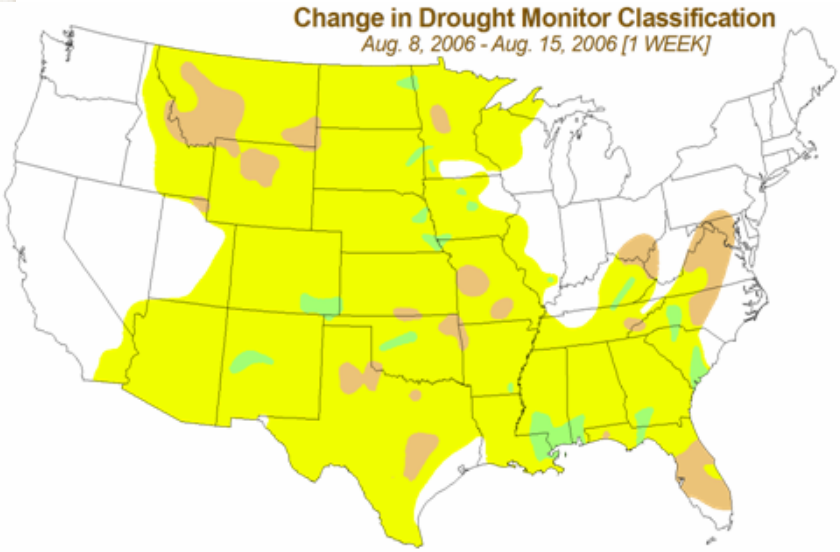
USDA National Drought Mitigation Center

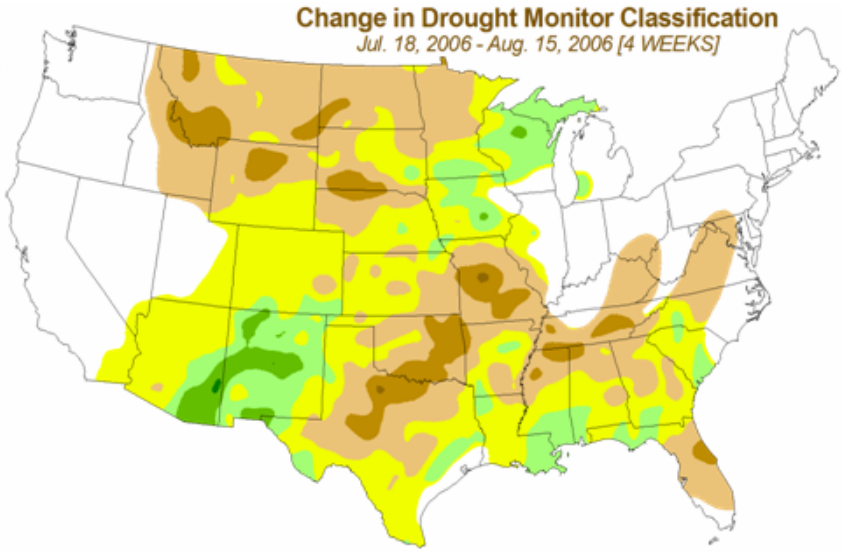
Released Thursday, August 17, 2006

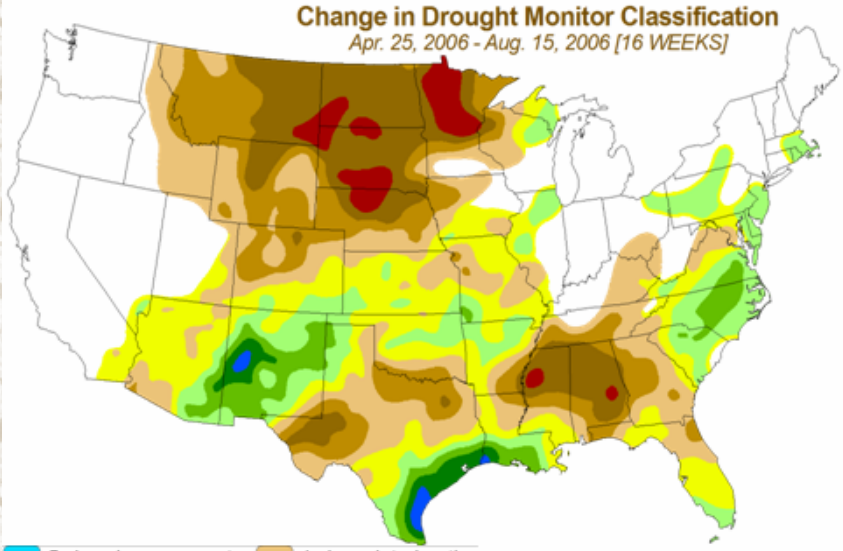
Author: Mark Svoboda, National Drought Mitigation Center

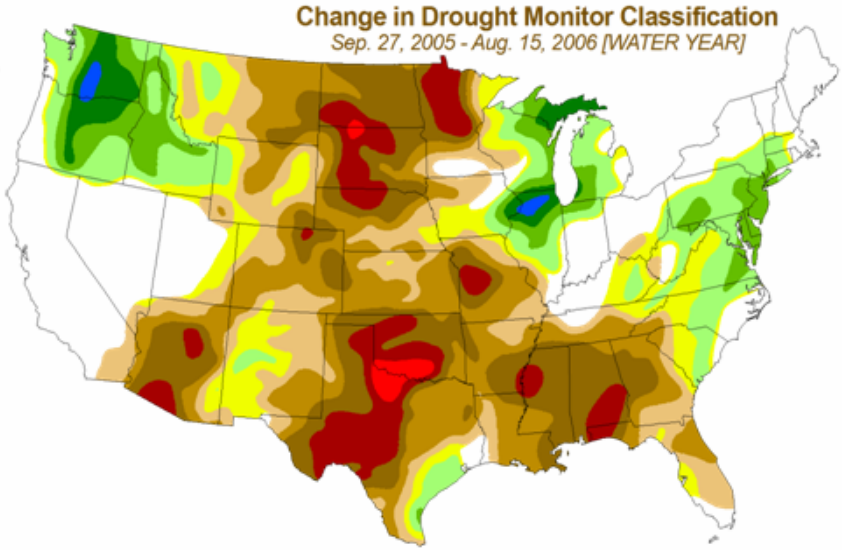
University of Nebraska Lincoln

National Drought Mitigation Center









5 class improvement
4 class improvement
3 class improvement
2 class improvement
1 class improvement
unchanged
1 class deterioration
2 class deterioration
3 class deterioration
4 class deterioration
5 class deterioration

These maps depict approximate changes in drought intensity from selected initial times to the current week, with no consideration given to intervening weeks. The difference calculations are based on interpolated 4 km grids of Drought Monitor classifications, and as a result, will be smoother than would similar products based directly on the published versions of the Drought Monitor.

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National Drought Mitigation Center

U.S. Drought Monitor

August 13, 2006
Valid 8 a.m. EST

Nebraska

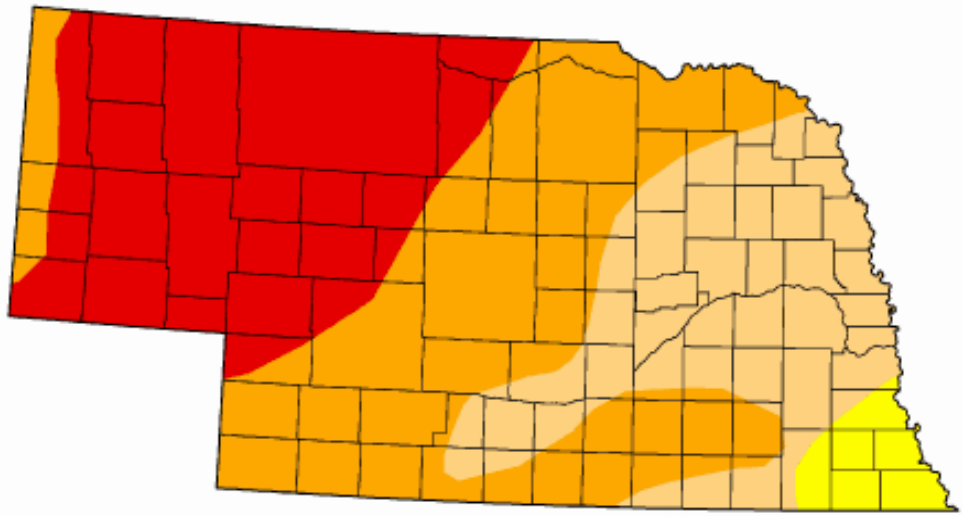
Current Conditions (Percent Area)

D0	D1	D2	D3	D4	None
100.0	96.4	71.9	34.1	0.0	0.0

Change in Percent Area Coverage

	D0	D1	D2	D3	D4	None
Last Week	100.0 (0.0)	99.0 (-2.6)	81.6 (-9.7)	34.1 (0.0)	0.0 (0.0)	0.0 (0.0)
Year to Date	87.0 (+13.0)	34.5 (+61.9)	0.2 (+71.7)	0.0 (+34.1)	0.0 (0.0)	13.0 (-13.0)
Water Year to Date	72.5 (+24.5)	40.5 (+55.9)	0.0 (+71.9)	0.0 (+34.1)	0.0 (0.0)	27.5 (-27.5)

* Values in parentheses represent change in percent area coverage



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http://drought.unl.edu/dm

USDA National Drought Mitigation Center

Released Thursday, August 15, 2006
Mark Svoboda, National Drought Mitigation Center

University of Nebraska Lincoln

National Drought Mitigation Center

Nebraska Water Supply Update…

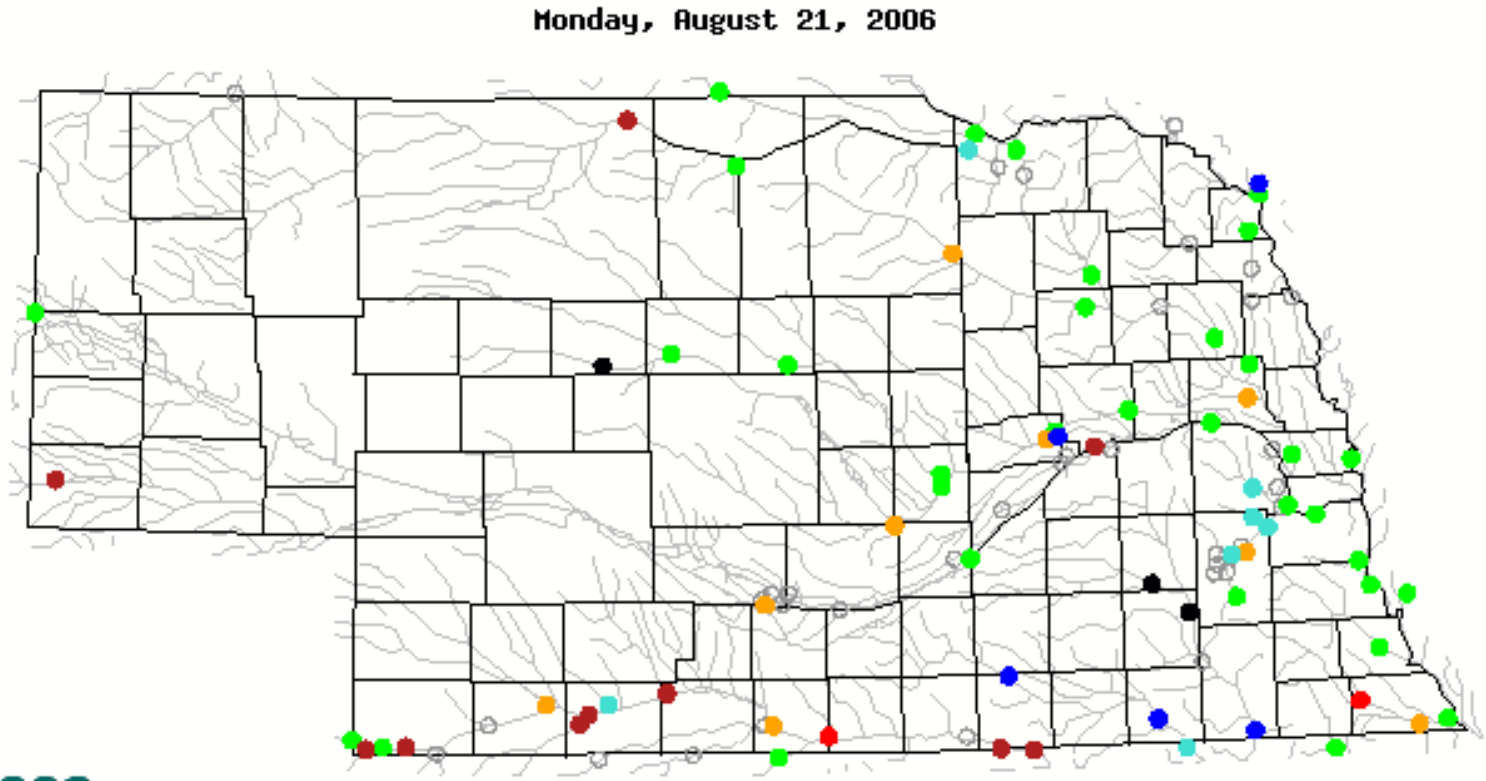
Platte River, Hamilton/Hall County Line, June 6, 2006

Ken Dewey

University of Nebraska Lincoln

National Drought Mitigation Center

Map of 7-day average streamflow compared To historical streamflow for the day of year



USGS

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

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Lake McConaughy

August 2005: level 8 feet above 2004's record low level (3,197.6 ft). There had been 6 straight years with declines from 1998 through 2004.

BOR snowmelt runoff forecast February 1, 2006 130% of normal

BOR snowmelt runoff forecast June 1, 2006 less than 50% of normal

June 2006: level 3 feet above 2005…but dropping

SOURCE: CNPPID

Lake McConaughy

(as of August 22, 2006)

370,600 af (21.3% of capacity)
3,199.9 feet
(5.6 ft. below this time last year)

Record: 3,197.6 feet

SOURCE: CNPPID

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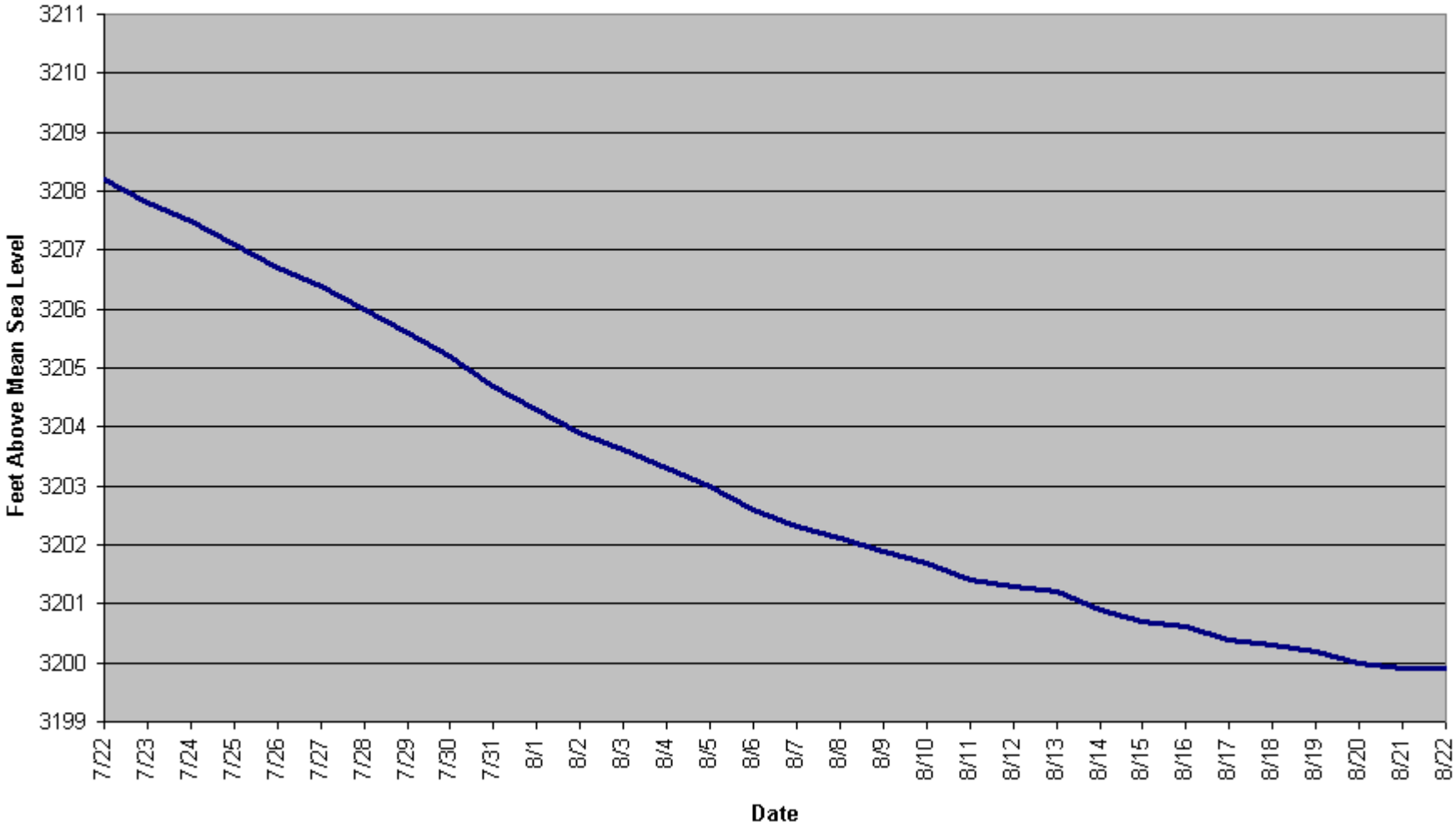
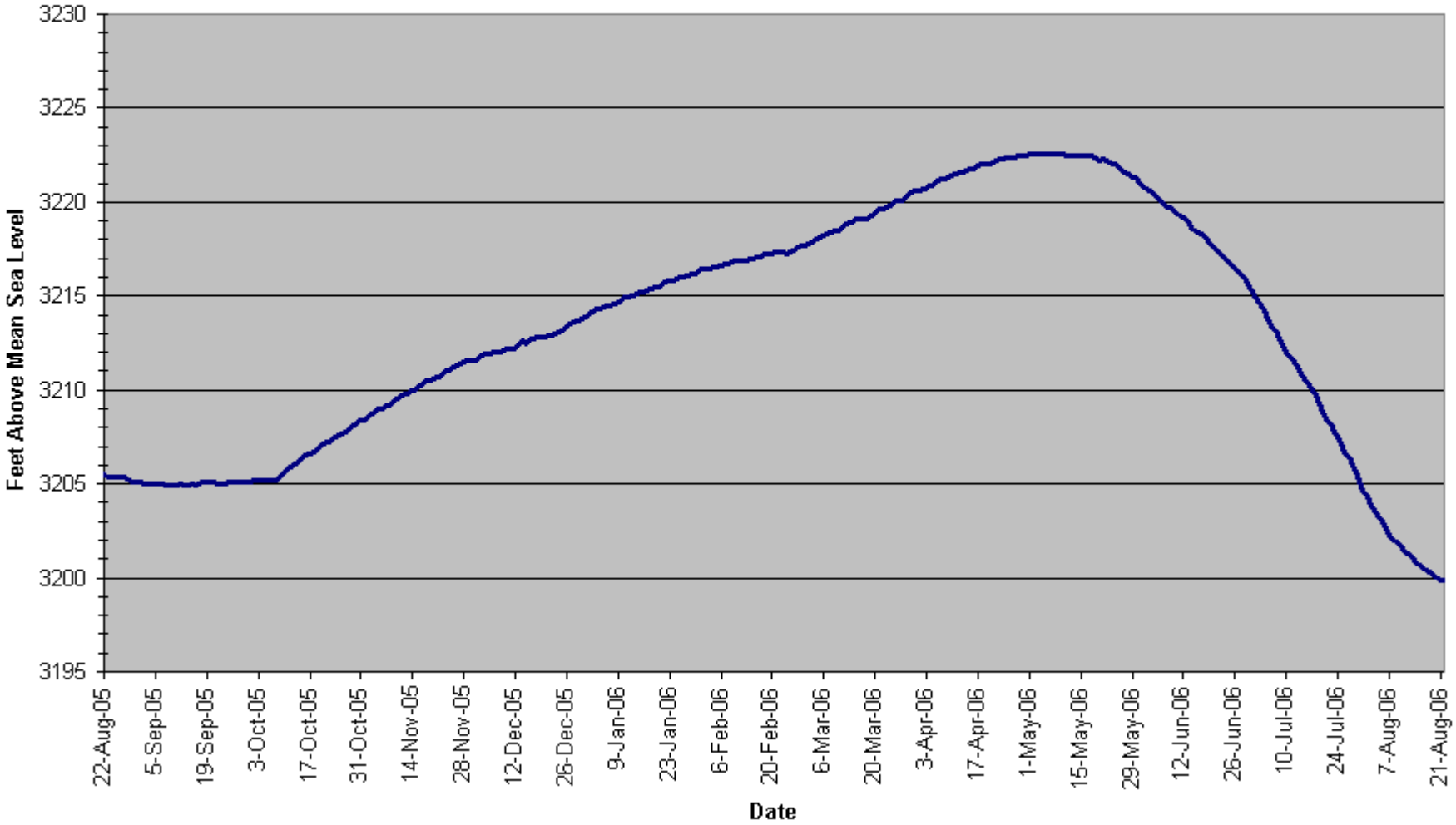
Lake McConaughy Elevation

July 22 to Aug. 22, 2006



Lake McConaughy Elevation
Since Aug. 22, 2005



Lake McConaughy Elevation
1941 to Present

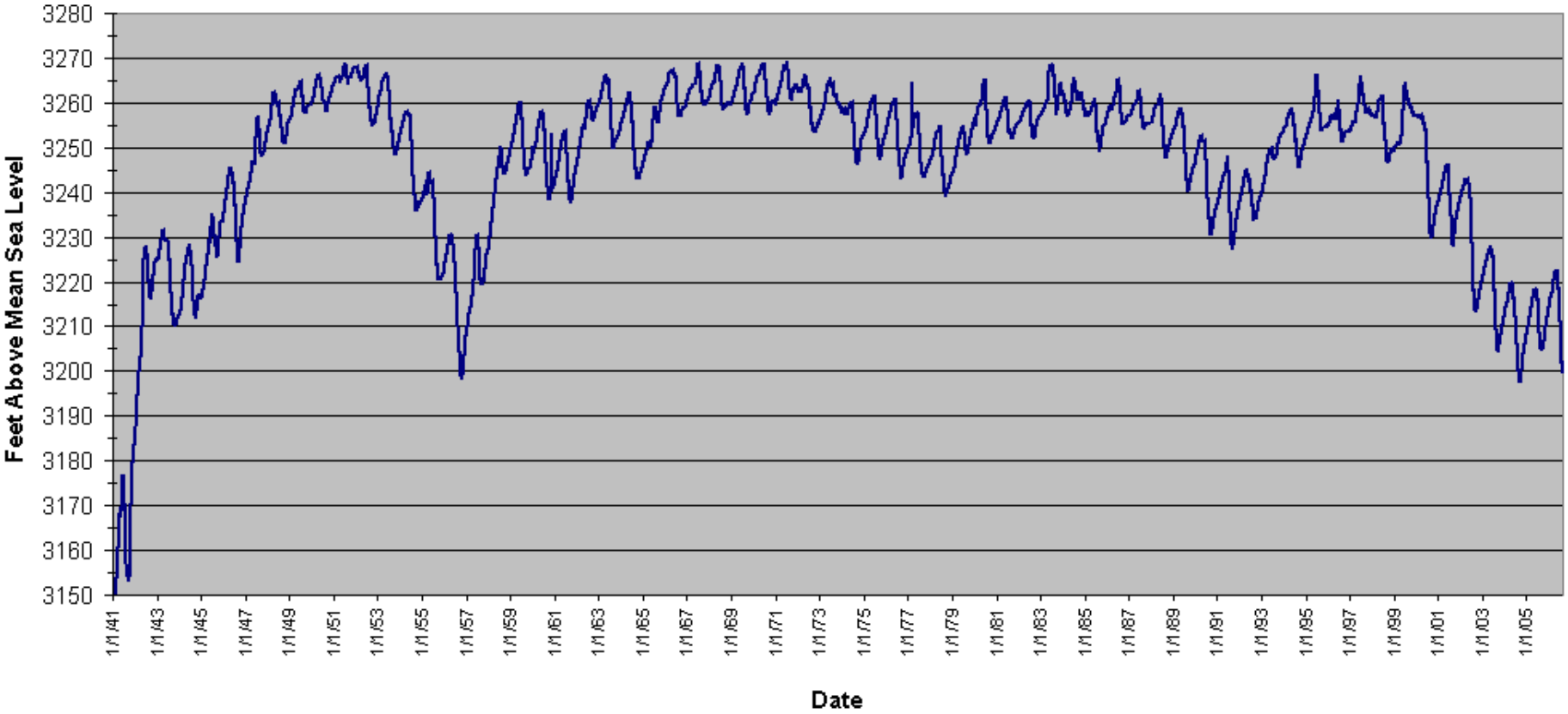


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Photo by John Valentine, 2004

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National Drought Mitigation Center

Republican River Basin

- Courtesy of Bill Peck, McCook Office, Bureau of Reclamation
- June: “Overall, not very good”
- Inflows in 2006 ceased by mid April
- In 2006, irrigation began in May
  - Warm, windy, and dry month

Republican River Basin

- July hit all the reservoirs “very hard”
  - Releases on several were shut off
  - Harlan County shut off on July 23
  - Record low flows still occurring at Guide Rock

Republican River Basin

- August: really good spotty rains
  - Crops doing quite well
- Even with rains, zero to very little inflows
  - Example: Bonny Reservoir (with no releases during the season) is still hitting record low levels each day.
- Most reservoirs behind last year at this time

National Drought Mitigation Center

University of Nebraska–Lincoln

The National Drought Mitigation Center (NDMC) helps people and institutions develop and implement measures to reduce societal vulnerability to drought. The NDMC, based at the University of Nebraska–Lincoln, stresses preparation and risk management rather than crisis management.

What is Drought?	*An overview of drought • Climographs • Historical Palmer Drought Index maps and graphs • Drought and El Niño • The Dust Bowl*
Planning for Drought	*How (and why) to plan for drought • The 10-Step Planning Process • Directory of drought planning contacts*
Monitoring Drought	*How to select monitoring tools • The SPI, the U.S. Drought Monitor, and links to tools elsewhere on the web*
Understanding Your Risk	*Understanding drought's impacts • Current and historical drought impacts in the United States and around the world*
Mitigating Drought	*Putting a drought plan together • Existing drought plans and studies • Drought mitigation tools/initiatives • Water conservation*

About the NDMC
Contact Information
What's New
Site Map
Search the Site
Drought Network News
Publications

http://drought.unl.edu/

Quick Links!

For Media

Other Drought-related Sites

U.S. Drought Monitor

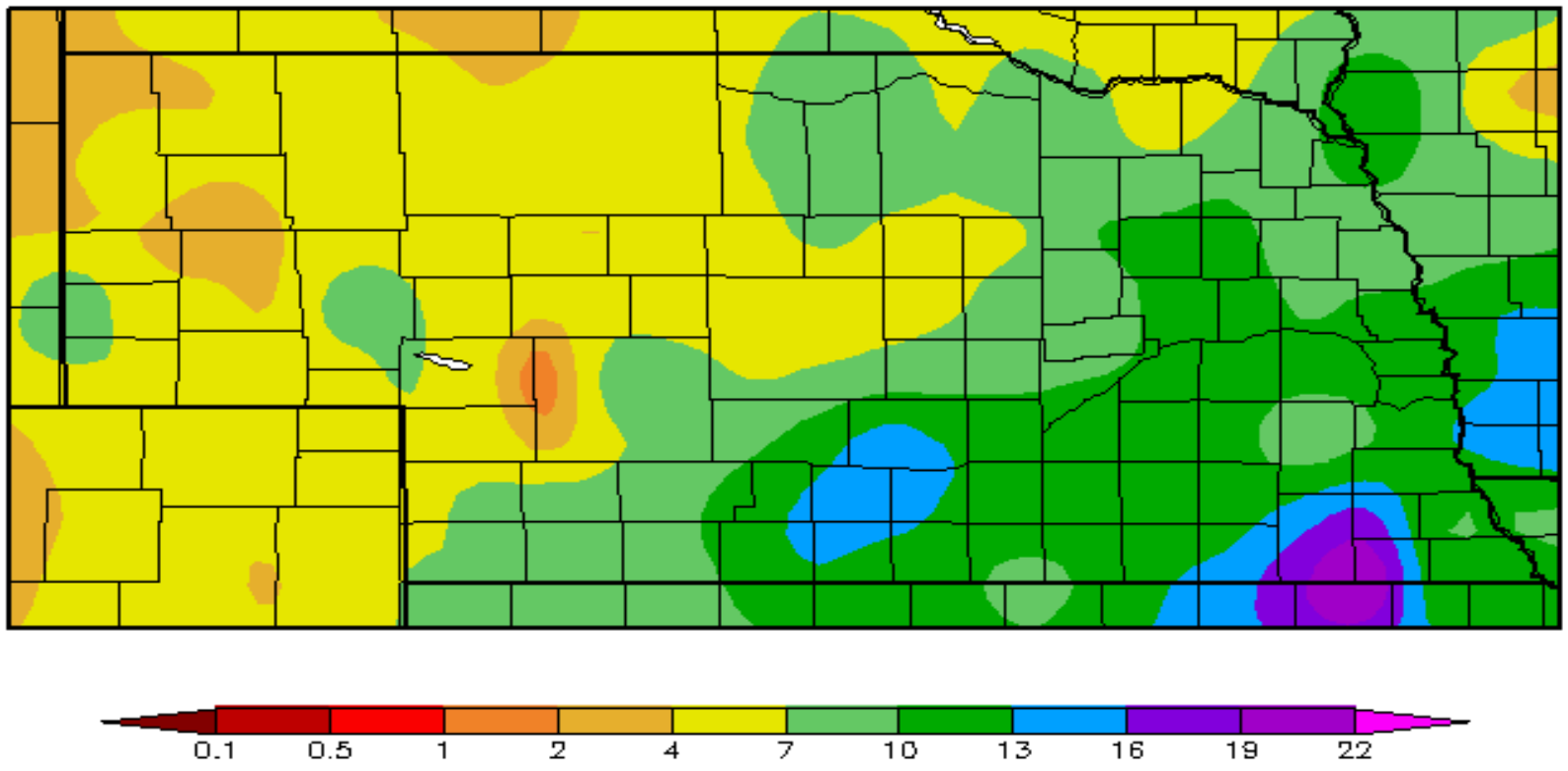
Interim National Drought Council

Nebraska Current Conditions…

University of Nebraska Lincoln

National Drought Mitigation Center

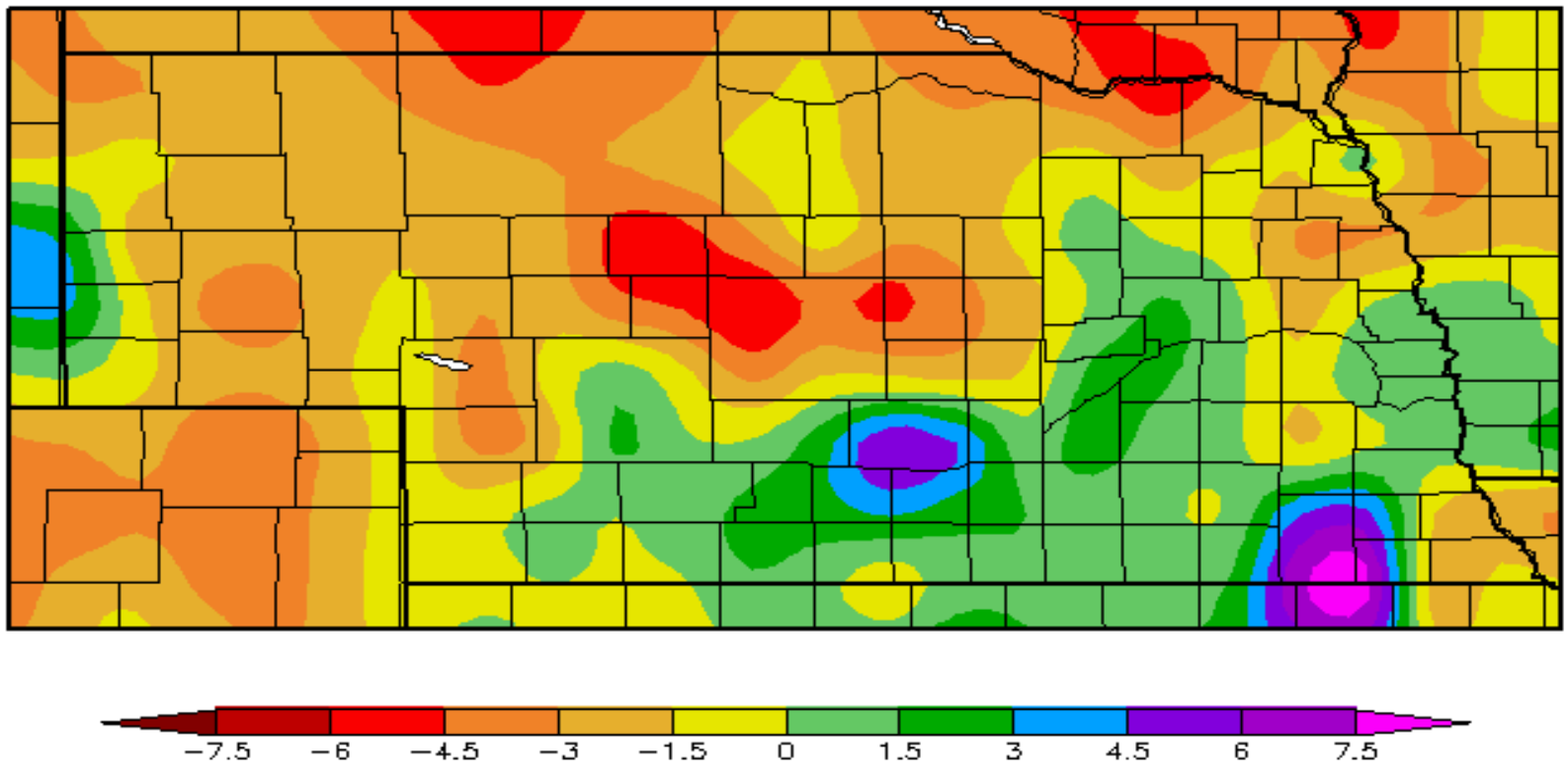
Precipitation (in)
5/23/2006 – 8/20/2006



Generated 8/21/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers

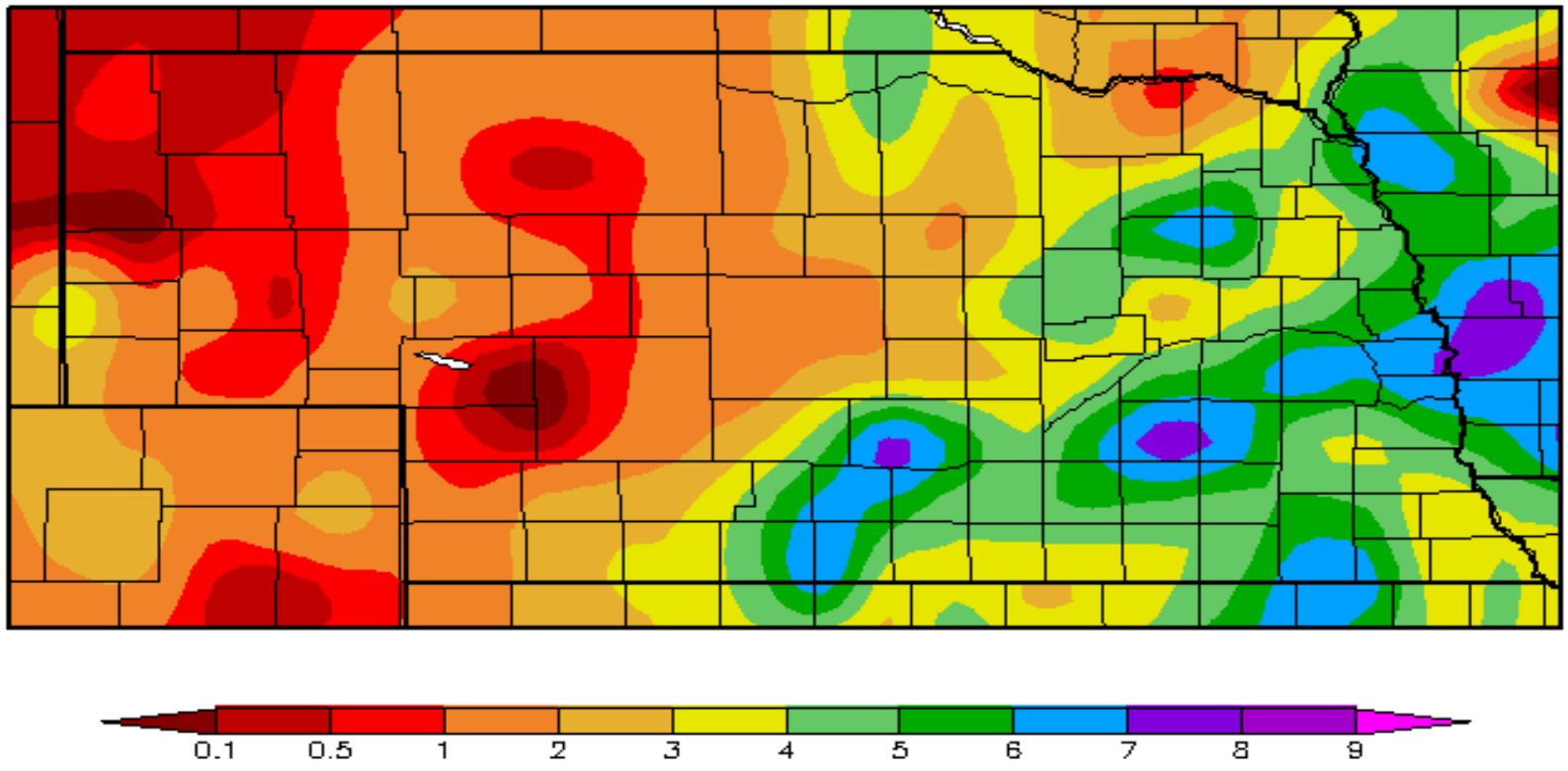
Departure from Normal Precipitation (in)
5/23/2006 – 8/20/2006



Generated 8/21/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers

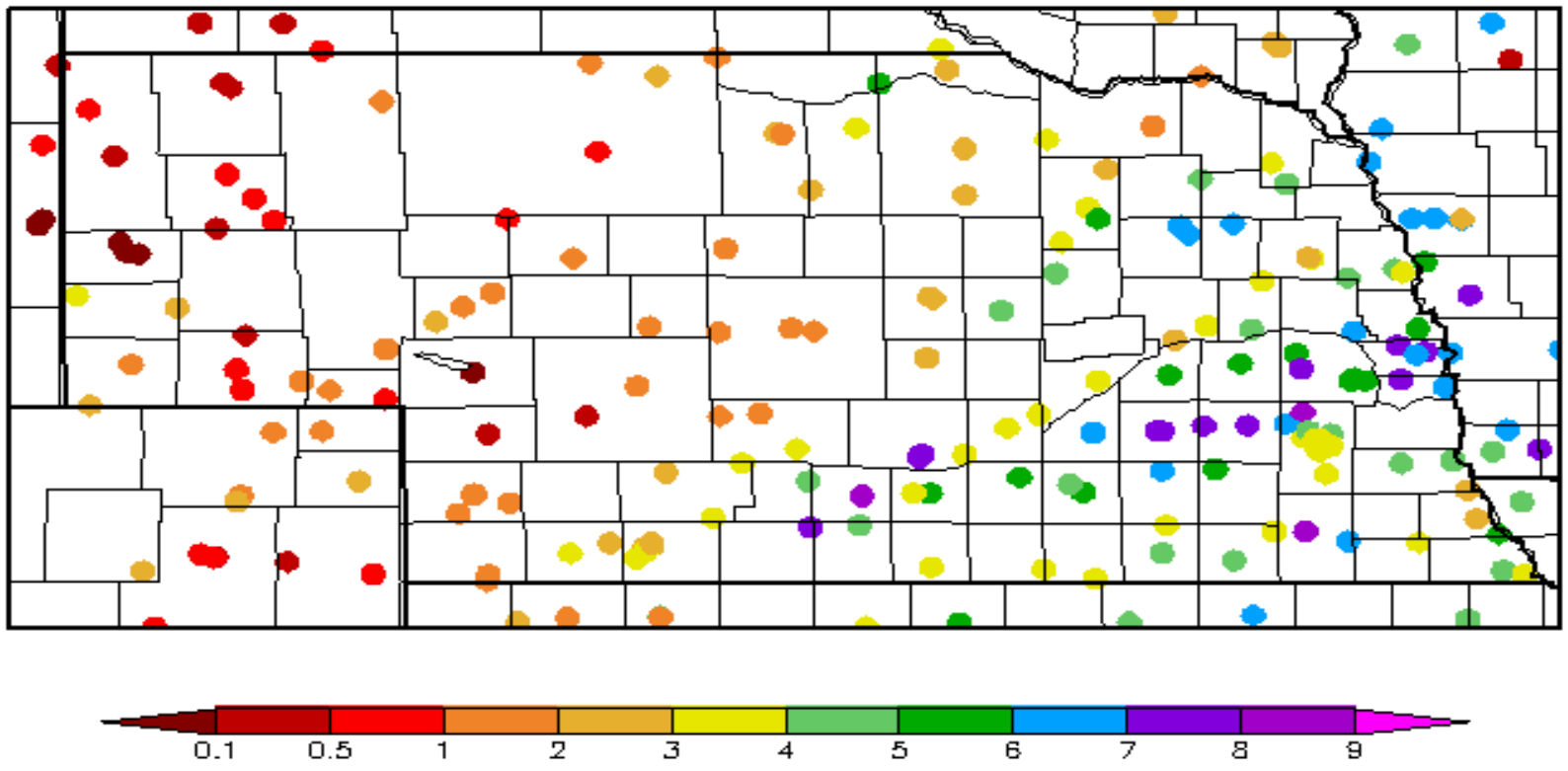
Precipitation (in)
8/1/2006 – 8/20/2006



Generated 8/21/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers

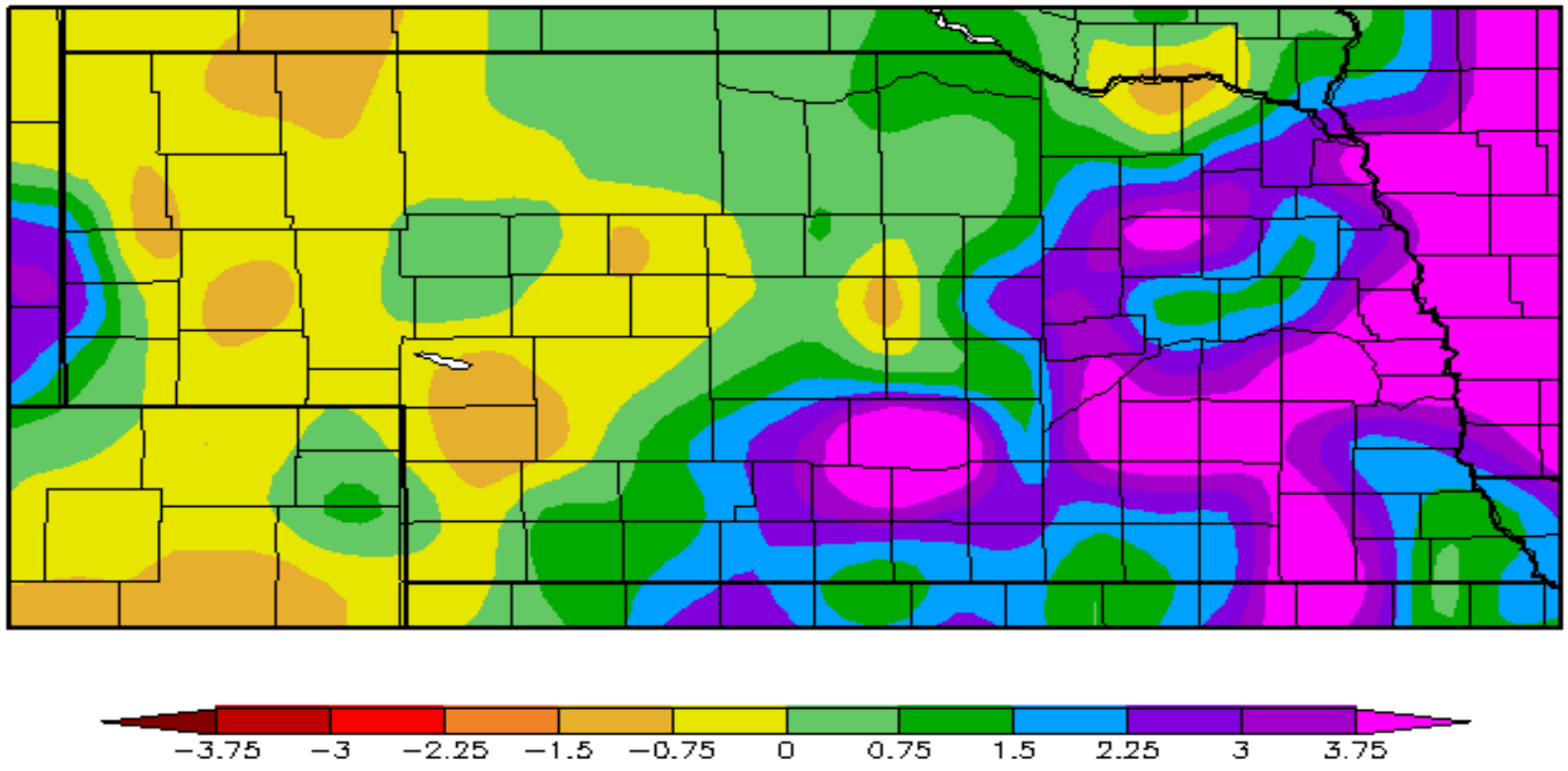
Precipitation (in)
8/1/2006 – 8/20/2006



Generated 8/21/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers

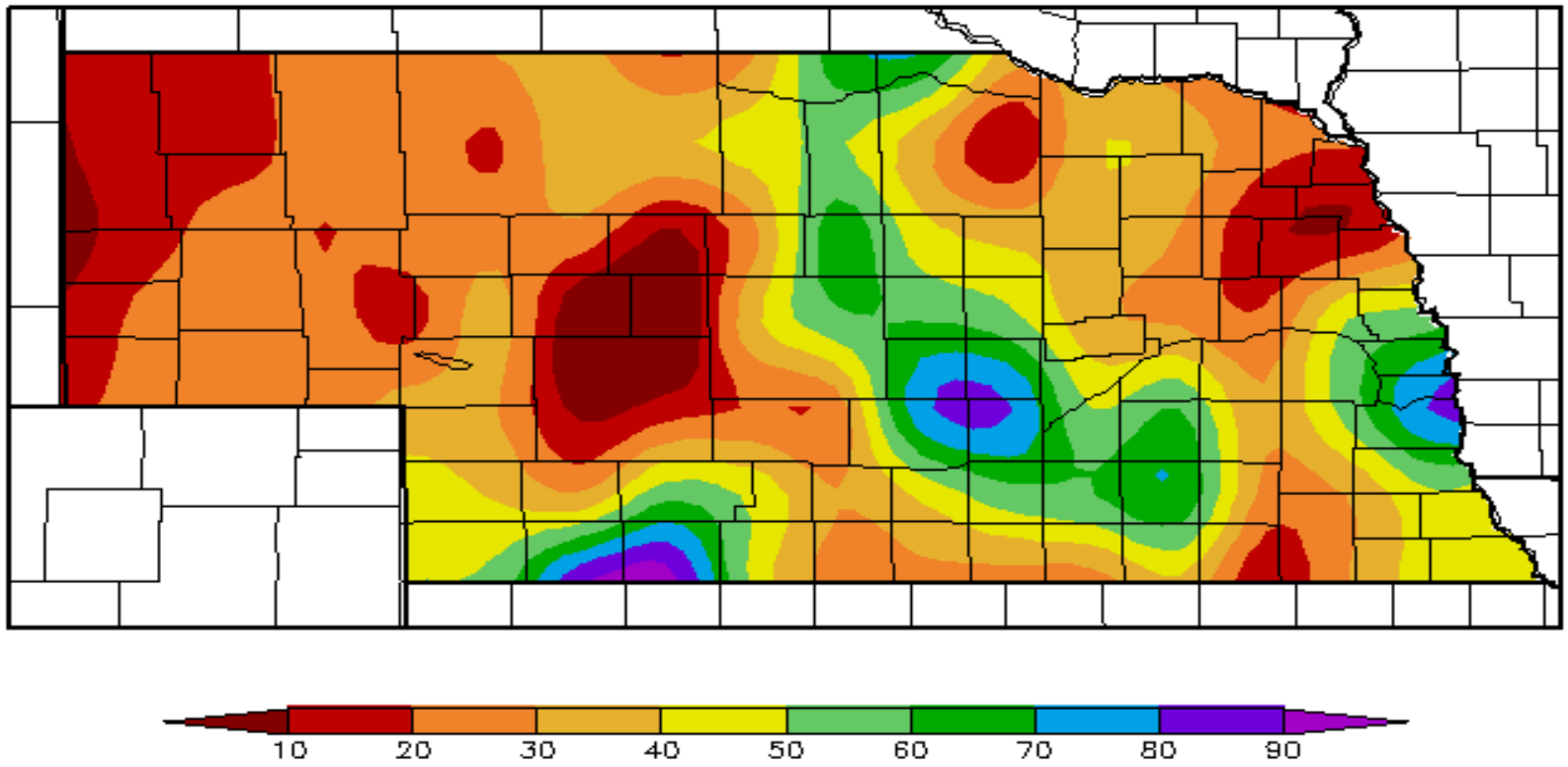
Departure from Normal Precipitation (in)
8/1/2006 – 8/20/2006



Generated 8/21/2006 at HPRCC using provisional data.

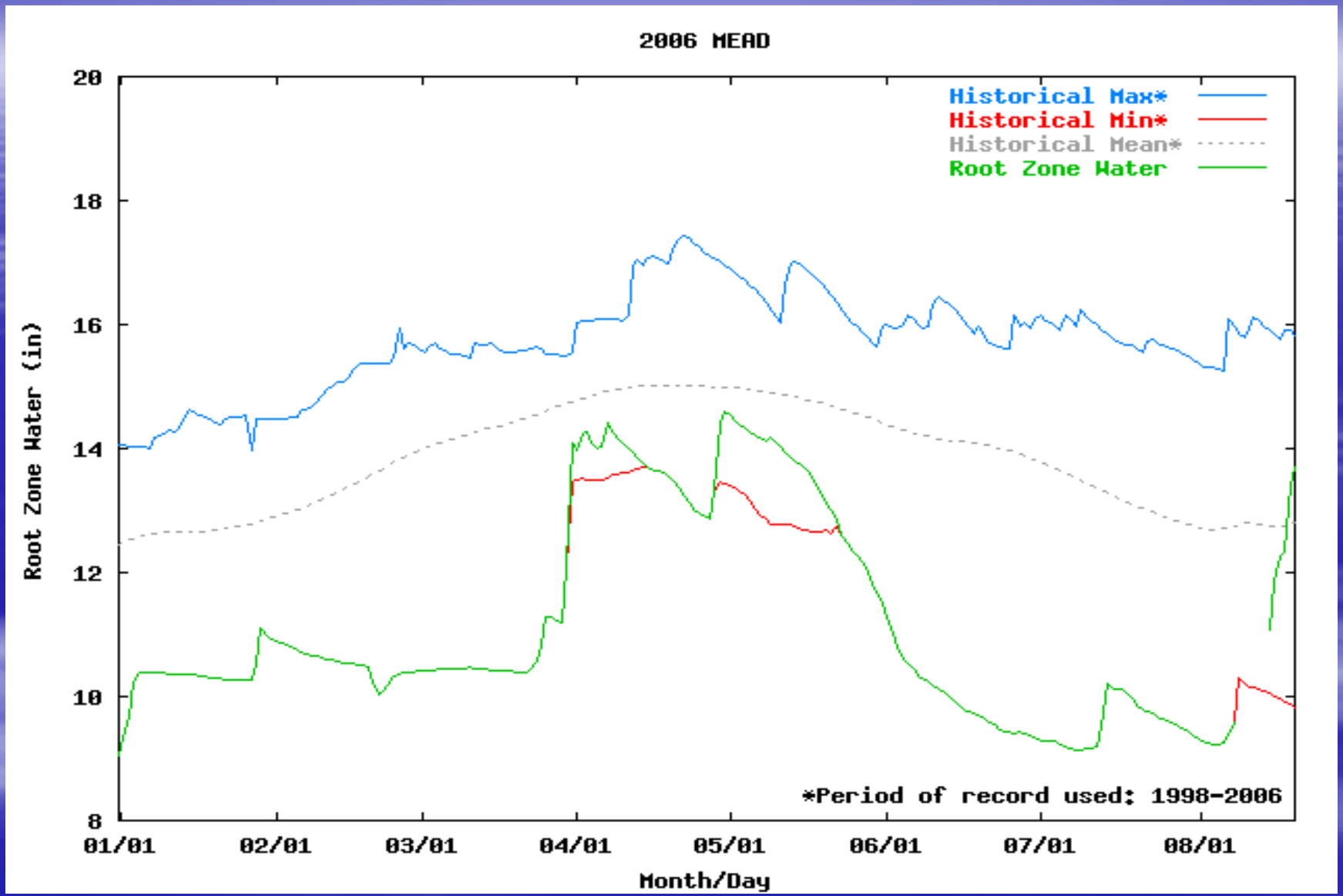
NOAA Regional Climate Centers

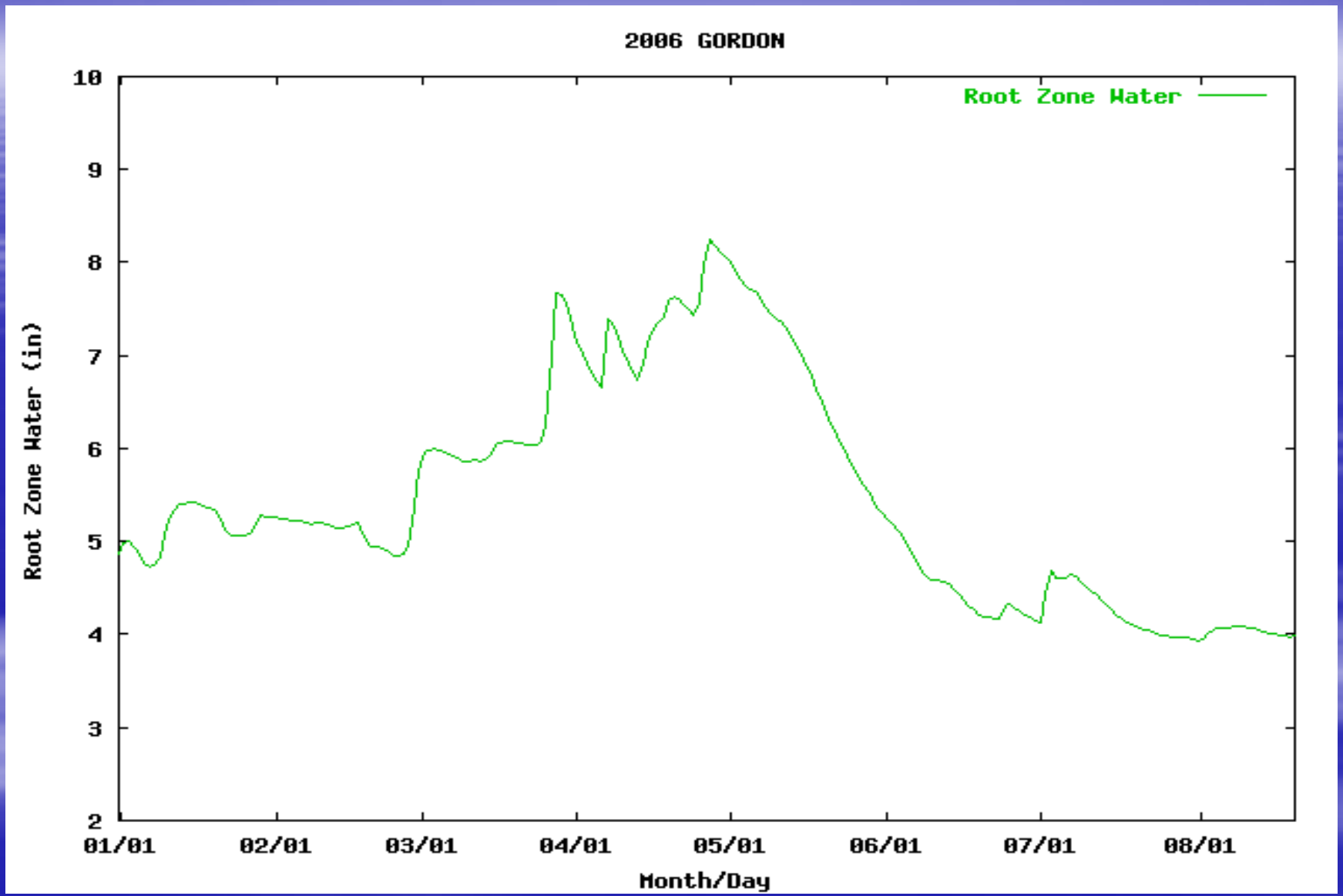
Percent of Max Available Water in Column (%)
8/14/2006 – 8/20/2006

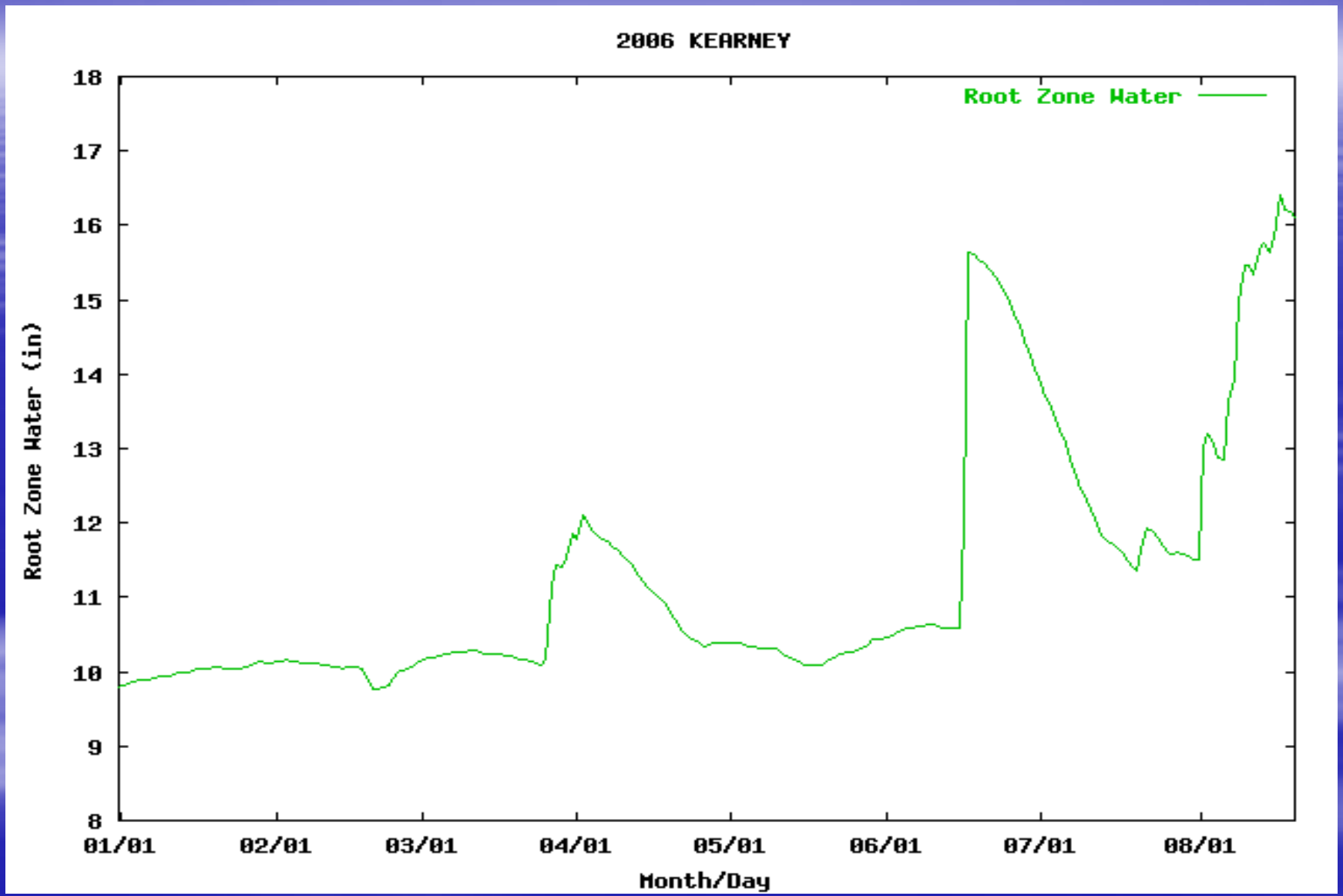


Generated 8/21/2006

High Plains Regional Climate Center


2006 MEAD
Historical Max*
Historical Min*
Historical Mean*
Root Zone Water
Root Zone Water (in)
20
18
16
14
12
10
8
01/01
02/01
03/01
04/01
05/01
06/01
07/01
08/01
Month/Day
*Period of record used: 1998-2006


2006 GORDON
Root Zone Water
Root Zone Water (in)
10
9
8
7
6
5
4
3
2
01/01
02/01
03/01
04/01
05/01
06/01
07/01
08/01
Month/Day


2006 KEARNEY
Root Zone Water
Root Zone Water (in)
18
17
16
15
14
13
12
11
10
9
8
01/01
02/01
03/01
04/01
05/01
06/01
07/01
08/01
Month/Day

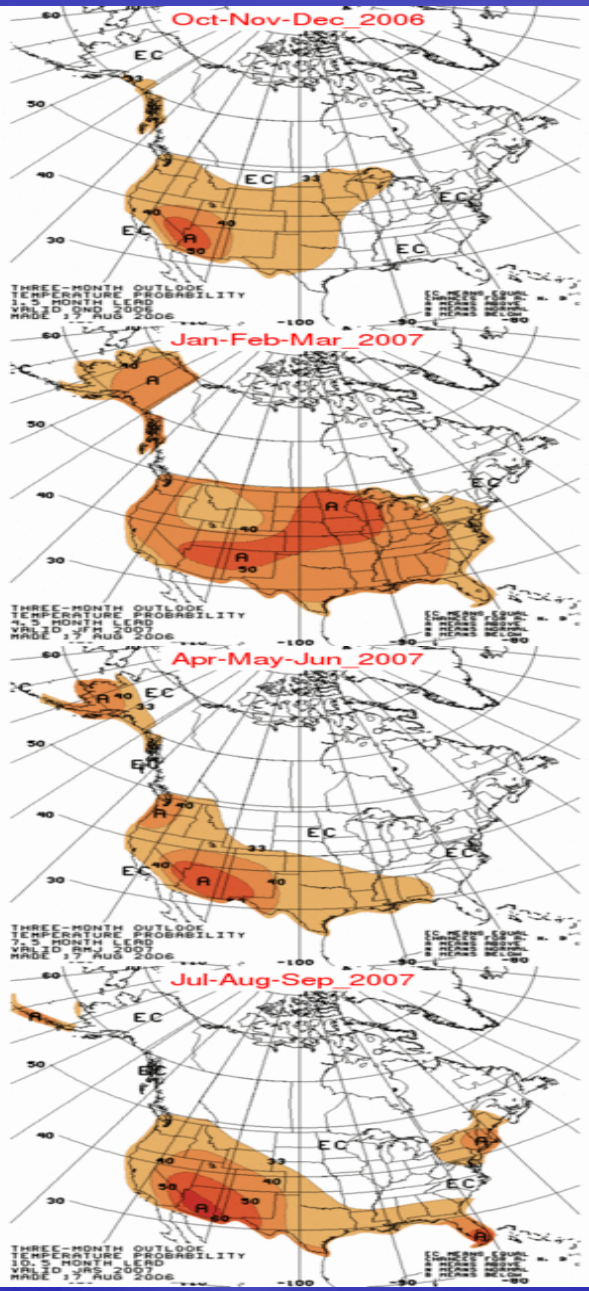
Number of Days Maximum Temperature was Greater than or Equal to Listed Threshold

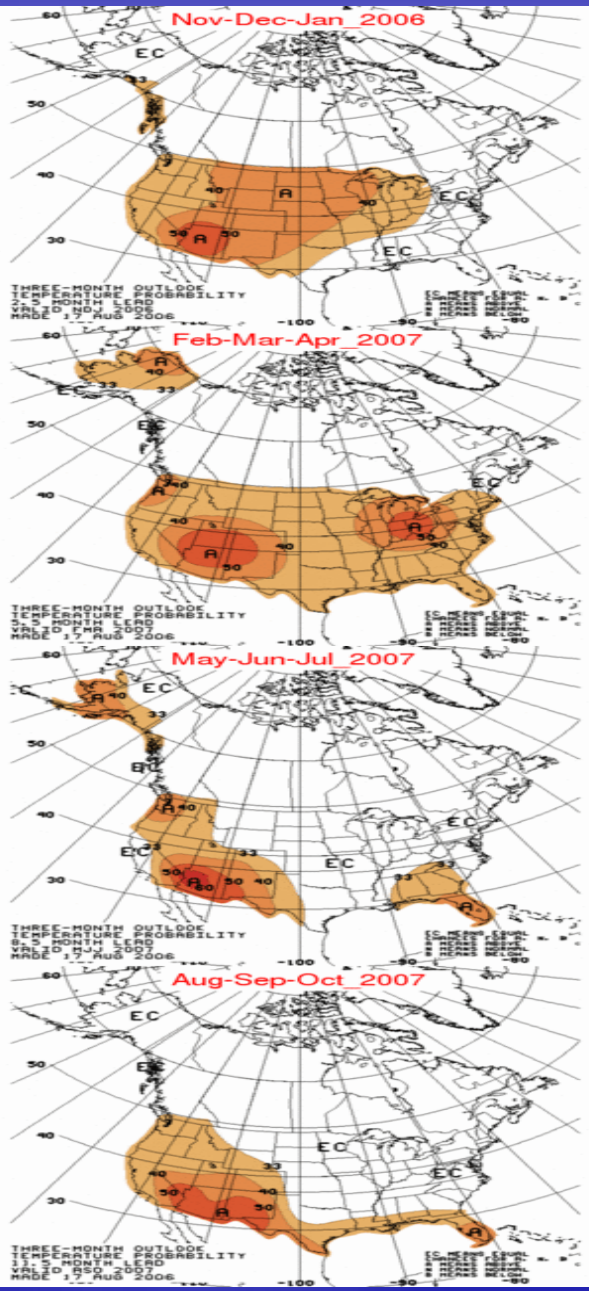
Station	95 F	Rank	100 F	Rank
Scottsbluff	29	12/113	11	7/113
Valentine	27	4/58	12	4/58
Norfolk	17	29/113	6	18/113
Grand Island	25	29/111	11	23/111
Omaha	15	29/71	5	17/71
McCook	33	33/96	17	17/96
Beatrice	22	43/116	9	31/116

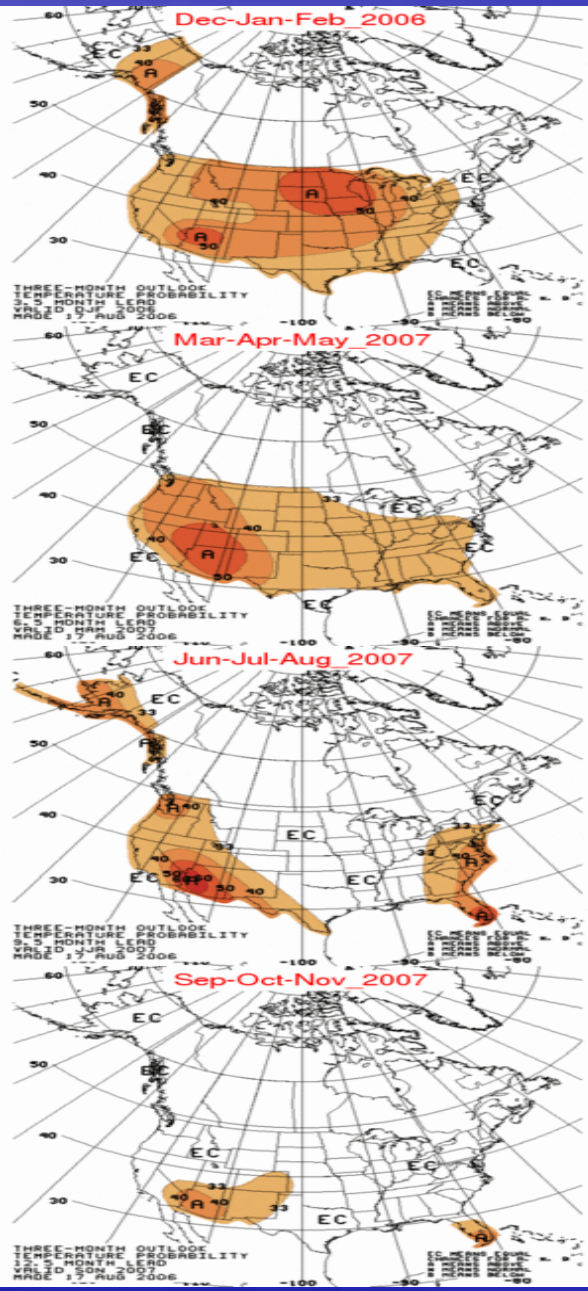
Maximum Temperature Recorded in Each Climate Division during 2006

Chadron	112	7/15
Valentine	113	7/16
Oakdale	106	7/16
Grand Island	109	7/19
Lincoln	108	7/19
Wauneta	113	7/20
Franklin	111	7/20
Hebron	108	7/20

Forecasts……..


Oct-Nov-Dec_2006


Nov-Dec-Jan_2006


Dec-Jan-Feb_2006

Jan-Feb-Mar_2007

Feb-Mar-Apr_2007

Mar-Apr-May_2007

Apr-May-Jun_2007

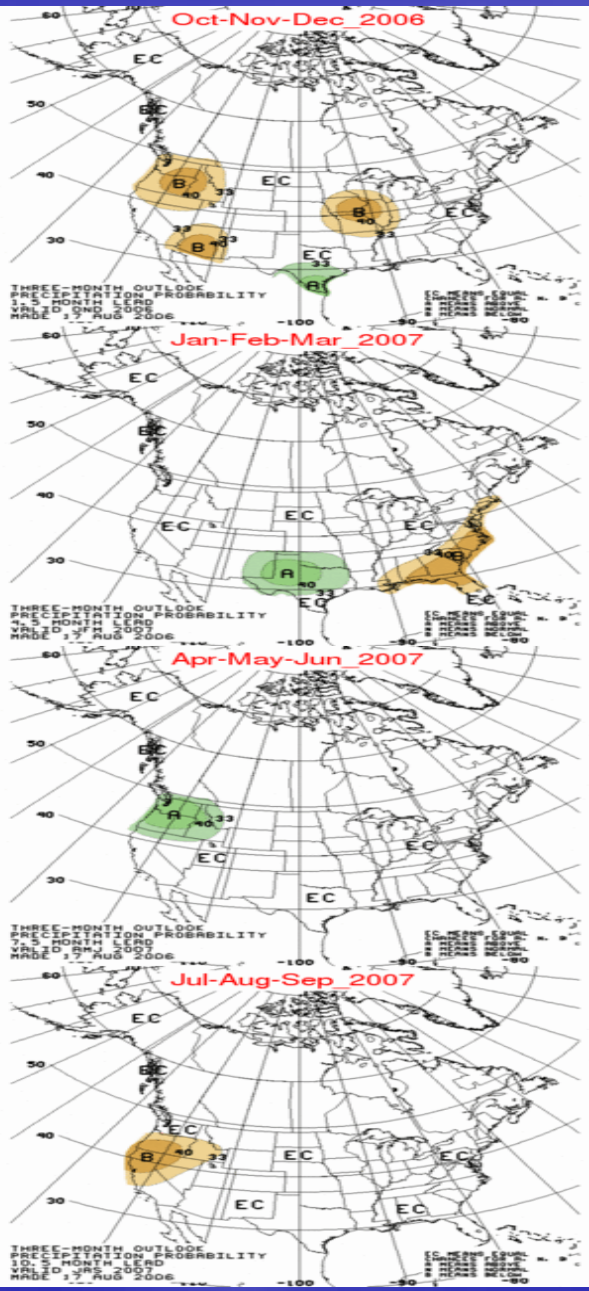
May-Jun-Jul_2007

Jun-Jul-Aug_2007

Jul-Aug-Sep_2007

Aug-Sep-Oct_2007

Sep-Oct-Nov_2007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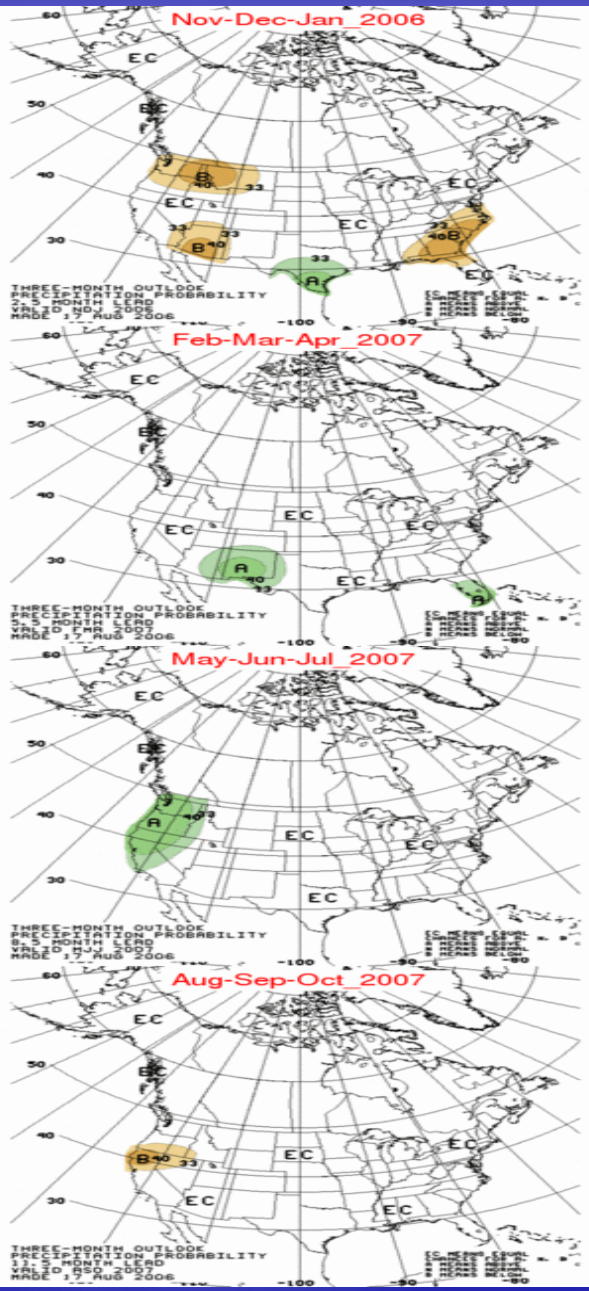
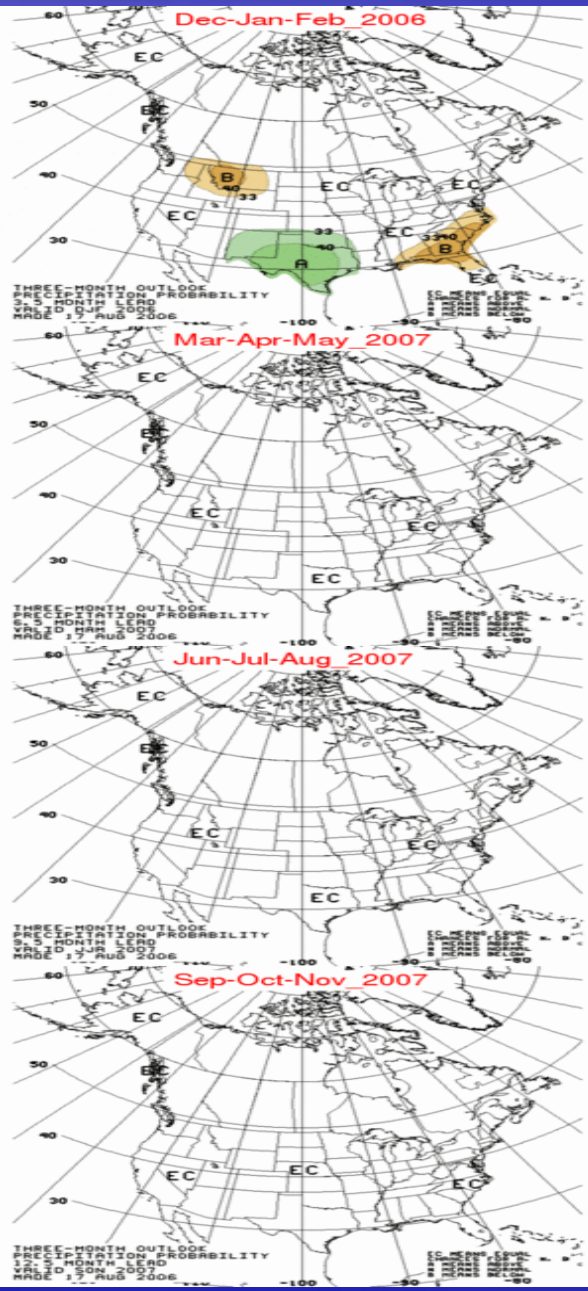

Nov-Dec-Jan_2006


Dec-Jan-Feb_2006

Jan-Feb-Mar_2007

Feb-Mar-Apr_2007

Mar-Apr-May_2007

Apr-May-Jun_2007

May-Jun-Jul_2007

Jun-Jul-Aug_2007

Jul-Aug-Sep_2007

Aug-Sep-Oct_2007

Sep-Oct-Nov_2007